

L 25340-65

ACCESSION NR: AR4046134

analysis of the photomultiplier output signal amplitude when the photocathode is illuminated by scintillation bursts from various crystal scintillators irradiated by a standard gamma source. Experimental results served to establish a poorly pronounced linear dependence of signal amplitude on temperature when a KI (Tl) crystal was used as a counter with the photomultipliers FEU-13 and FEU-11B. This counter is recommended as insensitive to variations of environmental temperature within the range from -50 to +50C (within 10% accuracy).

SUB CODE: OP,EM

ENCL: 00

Card 2/2

ENACHESCU, Georgeta; SOLDEA, I.; MARINESCU, Rodica

Biochemical modifications in onion bulbs during the winter.
Studii cerc biochimie 5 no.1:47-64 '62.

1. Institutul de cercetari horti-viticele, Bucuresti.

SOLDEA, V., biolog

Floating reed islets in the Danube Delta and rendering their
reed reserves valuable. Cel hirtie 10 no.3:69-74 Mr'61

1. Statiunea Experimentală Stufăriile Delta Dunării, Măliuc.

SOLDEK, Jerzy, mgr inż.

A simple power regulator for low-head hydroelectric-power plants.
Energetyka Pol 14 no.10:301-304 0 '60. (EEAI 10:3)

1. Politechnika Gdanska, Katedra Elektrotechniki.
(Hydroelectric-power stations)

S/271/63/000/002/009/030
A060/A126

AUTHOR: Soldek, Jerzy

TITLE: Electric time-delay relay

PERIODICAL: Referativnyy zhurnal, Avtomatika, Telemekhanika i Vychislitel'naya Tekhnika, no. 2, 1963, 30, abstract 2A194 P (Pol. pat. cl. 21c, 44, no. 44844, July 20, 1961)

TEXT: A circuit of a time-delay relay is proposed, consisting of a half-wave rectifier which, through a resistor, charges a capacitor parallel to which is connected a circuit consisting of a neon tube and an electromagnetic relay. The tube is shunted by a resistor whose circuit is closed through the relay contacts. The second pair of the relay contacts serves for closing the external circuit. The time-delay is controlled and determined by the time constant of the RC circuit. The charge on the capacitor of that circuit manages to flow down to zero through the circuit of a complementary loop which ensures stability of operation. There is one figure.

A. V.

[Abstracter's note: Complete translation]

Card 1/1

CZYŻOWICZ, Jozef; MILKIEWICZ, Franciszek; SOLDEK, Jerzy

Automatic control of the rod ejector on a mechanized cooler
steered by an analog device. Problemy proj hut maszyn 12
no. 2:60-63 F '64.

1. Biprohut, Gliwice (for Czyżowicz). 2. Politechnika,
Gdansk (for Milkiewicz and Soldek).

SOLBU, Icn; GORA, Vladi, Jr, Ing.

Let us increase the economic efficiency of maintenance works
on local roads. Ray transport 11 no.19-461-468 O '64.

5.6 1200
CZECHOSLOVAKIA/Optics

K

Abs Jour: Referat Zhur-Fizika, 1957, No 4, 10354

Author : Sole Ivan

Inst : Not Given

Title : Graphic Calculation of Birefringence Filter.

Orig Pub: Ceskosl casop. fys., 1955, 5, No 1, 114-116

Abstract: Description of a method of plotting nomograms for the calculation of a birefringence filter and a procedure for using this nomogram. It is indicated that a nomogram of dimension one square meter insures an accuracy to 1 A.

Card : 1/1

CZECHOSLOVAKIA/Solid State Physics - Crystallization

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Abstr Jour

: Ref Zhur - Fizika, No 12, 1959, 27423

Author

: Sole, Ivan

Inst

: Research Institute for Minerals, Turnov, Czechoslovakia

Title

: Periodic Twin Growths of Crystals and Their Application

Orig Pub

: Jemna. mech. a opt., 1959, 4, No 2, 53-58

Abstract

: Attention is called to the classical phenomenon of twin growth of crystals. New optical properties of crystals due to this phenomenon are investigated, and a possibility is noted of their application for monochromatic filters. The method by which twin crystals of potassium chlorate are obtained from its solutions is described, and data are given on the

Card 1/2

No 27423

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CZECHOSLOVAKIA/S5

Ab's Jour

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- 54 -

Sole, J.

"Gyroscope for orientation purposes in mine surveying." p.97

TECHNICKA PRACA. (Rada vedeckych technickych spolocnosti pri Slovenskej akademii vied)
Bratislava, Czechoslovakia, Vol. 7, no. 3, 1955.

Monthly List of East European Accessions (EEAI) IC, Vol. 8, No. 9, Sept. 1959

Uncl.

ca

hydrolysis of wood with formic acid. *Selchinsk. Leshkhimicheskaya Prom. 2, No. 3, 1-10(1931).* Best results were obtained in the hydrolysis of the pulp (in one stage) under the following conditions: Soaking for 1 1/2 hrs. at room temp. in a mixt. of 77.5% HCOOH, 14.2% HCl and 8.3% H₂O, followed by heating to 70° for 1/2 hr. and hydrolysis for one hr. at the above temp.

The yield of reducing sugar amts. to 52% of the dry pulp. In a three-stage hydrolysis with a gradual removal of the products of hydrolysis from the reaction sphere, the yield of reducing sugars is 61%. In the hydrolysis of the pulp from various species of trees in one stage the yields of reducing sugars were as follows: from spruce 54.4, pine 53.1, aspen 52.4, poplar 54.5 and birch 48.1%. In the regeneration of spent acids 6-8% could not be recovered from the pulp. Glucose is almost absent in the hydrolysis with 8% HCOOH in an alc. medium; however, in some cases 50% of all the pentoses is converted into pentose and partly into fufural.

A. A. Bochtling

ASH SLA METALLURGICAL LITERATURE CLASSIFICATION

1ST AND 2ND ORDERS										PRECEDENCE AND PRIORITY INDEX										1ST AND 2ND ORDERS									
<p>CA</p> <p>21</p> <p>Preparing acetylcellulose for varnish used as insulators in the electrical industries. N. V. Solovnikov. <i>J. Applied Chem.</i> (U. S. S. R.) 6, 84-92(1933).—The conditions for the prepn. of insulating varnishes from cellulose acetylated in the presence of H_2SO_4 are: Acetylation for 5-6 hrs. at 30°, sapon. for 15-20 hrs. at 34° after a treatment of the material for 1 1/2 hrs. at 18° with a mixt. of $AcOH$ and H_2SO_4. An attempt to increase the stability of the acetates by boiling with alkalis and acids was discarded because of a superficial sapon. of the acetate and of a porous mty. of the material in acetone. Finally, an acetate was obtained with the use of a $ZnCl_2$ catalyst, from a superficially nitrated substance, whereby it was possible to effect acetylation before a strong hydrolysis of the cellulose. The acetate so obtained was stable and the reaction proceeded at a higher velocity than with the H_2SO_4 catalyst. If the temp. is lowered from 80° to 60 (40° acetates of a much higher viscosity are obtained. They can be used in the prepn. of silk. The exptl. procedure is described. Forty-six references. A. A. Bochtlingk</p>																													
<p>ASD-5LA METALLURGICAL LITERATURE CLASSIFICATION</p>																													

CH

23

Nitration of homocellulose and of β fiber. N. Va. Sokolov. *J. Applied Chem.* (U. S. S. R.) 6, 918 (1953). Only a small yield of nitrocellulose is obtained by nitrating xylan and it is still lower with elevated nitration temps. It was impossible to obtain a complete nitration of xylan. Nitrocellulose can be stabilized. The presence of xylan in the fiber lowers the N content in the nitrocellulose. In nitration of β -fiber the yields of N derive are equiv. to the compns. of the N mixts. used. The stabilization of the product was handicapped by the density of the powder. This difficulty was, however, overcome by the use of an agitator. The expts. are discussed. A. A. B.

AND SEE DETAIL OF LITERATURE CLASSIFICATION

11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

CA

23

Superficial esterification of paper. N. Ya. Solochuk and N. N. Motovilova. *Doklady Akad. Nauk SSSR*, 1963, 18, No. 10, 30-43 (1963).—Paper was esterified with stearyl chloride by the method of Fringsheim, Lorned and Warrel (C. A. 26, 6123), with such changes in the conditions of the reaction, time and temp. as to insure only a partial and superficial esterification. The lab. expts. were made in a glass app. with the exclusion of air and humidity. The paper was dried at 100°, and xylene was dried with metallic Na and redistilled. The paper (4 g.) wetted with 40 g. quinoline and then heated in an oil bath with 40 g. stearyl chloride in 180 cc. xylene was washed with boiling alc and dried at 100°. The paper treated with quinoline and the soln. of stearyl chloride in xylene were preheated to the desired temp. of the esterification before use in the process. The increase in wt. of the esterified paper was 44% (esterification of 0.25 of 1 OH group) on heating 3 min. at 180° and 73% in 10 min. at 145° (0.5 of 1 OH). The products showed inferior mech. properties. Esterification to 20% decreased the hygroscopicity 50%. Esterification to 73% changed the hygroscopicity from 11.3% to 2.3% (the detns. were made at 15° in an atm. of 80% relative humidity). The elec. resistance of 73% esterified paper was 8.66×10^{14} as compared with 2.04×10^{14} for the same paper (after an exposure of 44 hrs. in an atm. of 100% humidity). Chas. Blane.

ca 23

A study of the properties of acetylstearate and phosphate. N. Ya. Solov'ev and N. D. Novod'itsva. *Plasticheskie Massy* 1964, No. 3, 9-12.—Acetylkellulose contg. 16% Ac groups (I) with excess H_3PO_4 gives an ester (II) with 2.5 of its OH groups replaced by Ac and 0.2 by phosphate. With stearic anhydride I gives an ester (III) with 2.5 OH groups replaced by Ac and 0.5 by stearyl. I and II are almost equally hygroscopic and mechanically strong, while III is less hygroscopic, but also is weaker. All the compds. transmit visible light. In the infra-red II is more transparent than I or III. In the ultra-violet I transmits to 2400 Å., II to 2530 Å. and III to 3500 Å.

H. M. Leicester

ASO-3LA METALLURGICAL LITERATURE CLASSIFICATION

FROM SYMBIOSIS

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12041 80-1100

056587 ONE ONE 150

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U Lignocellulose stearate. N. V. Schuch, *Leb. Chem. Ber. (Zem. J. No. 1, 12 (1913))*. In an investigation of the esters (acetates and stearates) of the individual wood components, as well as of the esters of the Cross and Bevan cellulose and of the whole lignocellulose, it was found that the esterification of the latter proceeds in a different way and yields other reaction products than the esterification of the individual wood components of the lignocellulose. This requires an investigation of not only the components of the lignocellulose esters, but mainly of the whole lignocellulose. The Cross and Bevan cellulose is incompletely acetylated when acted upon with the usual acetylating mixture, because of its contents in pentosans. The subsequent saponification of the primary acetates obtained from the Cross and Bevan cellulose does not yield completely acetone-sol. secondary acetates, which probably will interfere with the prepn. of acetone-sol. acetates from the lignocellulose without degumming the latter. This is explained by the probability of the presence of a highly polymerized chem. combination between the cellulose and the pentosans of the lignocellulose. In the action of the isolated lignocellulose components with the acid chloride of stearic acid (in the presence of tertiary amines), esters are obtained which are in part (cellulose tristearate, lignin stearate) or completely (xylan stearate) sol. in

23
C₁₈H₃₇ and EtOH + C₁₈H₃₇. The esterification of the whole lignocellulose, under identical conditions, yields a product 10% of which is sol. (and preliminarily degummed) in C₁₈H₃₇. The stearate yield (calcd. on the wt. of the lignocellulose from larch sawings) amounts to 600% and contains 72.25% of combined stearic acid. Such a large amt. of combined C₁₈H₃₇COOH imparts a marked hydrophobic character to the esterified lignocellulose. The stearate so obtained has a hygroscopicity of 0.1%, water absorption ability of 3.3%, and m. p. 240°. The xylan stearate was prepd. from stearyl chloride (11 parts by wt.) and dry xylan (1 part) in the presence of quinoline, by heating the mixt. for 15 min. to 115°. The product, C₁₈H₃₇(OH)(OC₁₈H₃₇COO)₁₁, contg. 80.23% stearic acid, is a brownish powder in 18°, sol. in C₁₈H₃₇. The lignocellulose stearate was prepd. from larch wood sawdust, stearyl chloride, aniline and xylene, by heating the mixt. to 135-140°. Small chips of pine wood yielded 100-20% of the stearate in the presence of the above ingredients and at a temp. of 115-18°. A. A. Reichtling

ASB-114 METALLURGICAL LITERATURE CLASSIFICATION

1ST AND 2ND CROSS										3RD AND 4TH CROSS									
PROCESSES AND PROPERTIES INDEX																			
<p><i>ca</i></p> <p style="text-align: right;">25</p> <p>Dyeing cellulose-ester films and varnishes. N. Ya. Sidorchuk and N. D. Novosil'tseva. <i>J. Applied Chem.</i></p> <p>(U. S. S. R.) 7, 187-92(1934).—The soly. of a great variety of dyes in combination with light and heavy solvents used in the prepn. of acetyl-, ethyl- and benzyl-cellulose films, such as the soly. of basic, acidic and indanthrene dyes and their ability to dye these cellulose derivs. were investigated. The stability to light of the dyes after their incorporation in cellulose films was examd. A. A. Roshitsinsk</p>																			
<p>450-55A METALLURGICAL LITERATURE CLASSIFICATION</p>																			
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COMMON ELEMENTS		COMMON TABLETS	
<p>Physical properties of parchment. N. Ya. Sokolnik. <i>Bumashnoye Prom.</i> 13, No. 8, 24-9(1934). Com. parchments show different degrees of transparency to light, depending on the method of production. The fuchsin-permeability and blistering tests are unreliable. The degree of parchmentization of paper is best estd. by the detn. of the degree of transparency per unit of thickness with a Se photoelement. Parchment is opaque in the entire ultra-violet and in the infra-red spectra. After 2.5 months of exposure to the elements, com. parchments showed a decrease of tensile strength of 15% in dry state and 30% in wet state, while the transparency increased from 53.5 to 55.5%, which is ascribed to the natural bleaching process. A much higher transparency results by a preliminary mercerization with 18% NaOH and subsequent treatment with 80% H₂SO₄. Considerable improvement of the phys. properties of parchment without affecting its transparency is effected by treating it either</p> <p>with 1% stearic acid in C₁₁, and then with a mixt. of 75 benzalkonium, 10 rosin and 15% triresyl phosphate in C₁₁, or with linseed oil and drying at 60-100° for 3-4 hrs. Good results with exptl. growing of radishes and lettuce in a parchment-lined conservatory suggest the possibility of substituting parchment for glass in the com. hot-house cultivation of vegetables. Chas. Blanc</p>		<p>23</p>	
<p>ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION</p>			

The properties of films of cellulose and its esters. I
The properties of cellulose acetate films. D. A. J. Cohen,
N. Ya. Sakshtuk and A. M. Kapizova. *Nardinskiy
Khimicheskiy Tseluloz Prom.* 5, 5, 8, R. Leningrad,
Plastmassy 1, 76-82 (1945).—Film of cellulose acetate
0.04-0.05 mm. thick has a tearing strength of 7 kg. per
sq. mm and a 10% elasticity. Two days' soaking in
H₂O lowers the strength slightly and raises the elasticity
10%, while 1-2% H₂O is absorbed. After 2 months'
soaking, however, the film becomes brittle. When
plasticizers are added, the hygroscopicity is greatly
lowered, and the strength and the elasticity after wetting
also fall somewhat. A similar result is attained by increas-
ing the no. of acetyl groups on the cellulose. A sharp
fall in hygroscopicity is noted when the content of acetyl
group is increased from 5% to 56%. The more polar a
plasticizer, the more easily it takes up H₂O, and the less
it protects the film from moisture. Nonpolar materials
do not plasticize well. Hence these plasticizers which
are neither too polar nor too nonpolar give the best results.
Such are Ph₂PO₄, MeC₂H₄PO₄, and di-Et phosphate.
When 5-30% of a plasticizer is added to a film, the hygro-
scopicity drops sharply, and further increase of the amt.
of plasticizer does not greatly change this property. The
amt. of H₂O absorbed by a film is the resultant of the
hygroscopicity and the amt. of material added. by H₂O.
The applications of modern theories to the behavior of films
made from cellulose. *Ibid.* 52-110.—The hygroscopicity
and H₂O absorption of films are characteristic of their
components, and are almost proportional to the polarity
of these. Thus, H₂O absorption decreases steadily from
Cellulophase (pure cellulose) through cellulose acetates
and nitrates, ethyl- and benzyl-cellulose to polystyrene,
which is nonpolar and nonhygroscopic. Hydrophobic
plasticizers reduce the hygroscopicity of films, especially
of those from cellulose nitrates and benzyl-cellulose. The
latter gives the best of the films studied. The amt. of
material added, by H₂O is practically 0 for benzyl- and
ethyl-cellulose, and is 0.5-1% for cellulose acetates and
nitrates. The film strength is a max. for polar Cellulophase
and a min. for nonpolar polystyrene. Wetting has
little effect on the strength of films from
polystyrene. It raises the strength slightly for films
from hydrophobic compounds, like cellulose nitrates, like
lowers it slightly for those from hydrophilic ones, like
cellulose acetates.

Oxidation of wood with nitric acid. N. Ya. Sotchenik. *Dokl. Akad. Nauk SSSR* 196, No. 4, 30-37 (1955).—Preliminary experiments in cooking aspen chips with 7% HNO_3 at 90° for 1.6 hrs. resulted in a 54% yield of pulp; this treated with 0.06-0.38% NaOH at 28-40° for 2 hrs. and bleached with 2% of active Cl_2 at 28-40° for 2 hrs. gave a pure white

product with a viscosity of 125-60 millipoises and 0.07-0.13% ash content (unbleached pulp). The spent liquor contained 10-13% of pentoses (calcd. as pentamannose), 4-6% of volatile acids (calcd. as AcOH) and 3-4% $C_2O_4H_2$. Cooking with 3% HNO_3 at 90° for 8 hrs. resulted in a consumption of 45% HNO_3 (on the wt. of aspen chips) with 3.5% of uncooked wood and 46.5% yield of pulp with Cu no. 2.5, 0.006% ash content and Sierst no. 57, which after washing the pulp with dil. NaOH was reduced to 12-20. The spent liquor, contg. 0% of pentoses, 5.4% of volatile acids and 3% $C_2O_4H_2$, recovered with a large excess of HCl or 4% H_2SO_4 , gave a yield of 4.5% of furfural (on the wt. of the chips used). The rate of the formation of pentamannose in the liquor proceeds with birch and spruce at a slower rate than in the similar decompos. of aspen.

Chas. H. H. H.

A 14-114 METALLURGICAL LITERATURE CLASSIFICATION

1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2039, 2040, 2041, 2042, 2043, 2044, 2045, 2046, 2047, 2048, 2049, 2050, 2051, 2052, 2053, 2054, 2055, 2056, 2057, 2058, 2059, 2060, 2061, 2062, 2063, 2064, 2065, 2066, 2067, 2068, 2069, 2070, 2071, 2072, 2073, 2074, 2075, 2076, 2077, 2078, 2079, 2080, 2081, 2082, 2083, 2084, 2085, 2086, 2087, 2088, 2089, 2090, 2091, 2092, 2093, 2094, 2095, 2096, 2097, 2098, 2099, 2100, 2101, 2102, 2103, 2104, 2105, 2106, 2107, 2108, 2109, 2110, 2111, 2112, 2113, 2114, 2115, 2116, 2117, 2118, 2119, 2120, 2121, 2122, 2123, 2124, 2125, 2126, 2127, 2128, 2129, 2130, 2131, 2132, 2133, 2134, 2135, 2136, 2137, 2138, 2139, 2140, 2141, 2142, 2143, 2144, 2145, 2146, 2147, 2148, 2149, 2150, 2151, 2152, 2153, 2154, 2155, 2156, 2157, 2158, 2159, 2160, 2161, 2162, 2163, 2164, 2165, 2166, 2167, 2168, 2169, 2170, 2171, 2172, 2173, 2174, 2175, 2176, 2177, 2178, 2179, 2180, 2181, 2182, 2183, 2184, 2185, 2186, 2187, 2188, 2189, 2190, 2191, 2192, 2193, 2194, 2195, 2196, 2197, 2198, 2199, 2200, 2201, 2202, 2203, 2204, 2205, 2206, 2207, 2208, 2209, 2210, 2211, 2212, 2213, 2214, 2215, 2216, 2217, 2218, 2219, 2220, 2221, 2222, 2223, 2224, 2225, 2226, 2227, 2228, 2229, 2230, 2231, 2232, 2233, 2234, 2235, 2236, 2237, 2238, 2239, 2240, 2241, 2242, 2243, 2244, 2245, 2246, 2247, 2248, 2249, 2250, 2251, 2252, 2253, 2254, 2255, 2256, 2257, 2258, 2259, 2260, 2261, 2262, 2263, 2264, 2265, 2266, 2267, 2268, 2269, 2270, 2271, 2272, 2273, 2274, 2275, 2276, 2277, 2278, 2279, 2280, 2281, 2282, 2283, 2284, 2285, 2286, 2287, 2288, 2289, 2290, 2291, 2292, 2293, 2294, 2295, 2296, 2297, 2298, 2299, 2300, 2301, 2302, 2303, 2304, 2305, 2306, 2307, 2308, 2309, 2310, 2311, 2312, 2313, 2314, 2315, 2316, 2317, 2318, 2319, 2320, 2321, 2322, 2323, 2324, 2325, 2326, 2327, 2328, 2329, 2330, 2331, 2332, 2333, 2334, 2335, 2336, 2337, 2338, 2339, 2340, 2341, 2342, 2343, 2344, 2345, 2346, 2347, 2348, 2349, 2350, 2351, 2352, 2353, 2354, 2355, 2356, 2357, 2358, 2359, 2360, 2361, 2362, 2363, 2364, 2365, 2366, 2367, 2368, 2369, 2370, 2371, 2372, 2373, 2374, 2375, 2376, 2377, 2378, 2379, 2380, 2381, 2382, 2383, 2384, 2385, 2386, 2387, 2388, 2389, 2390, 2391, 2392, 2393, 2394, 2395, 2396, 2397, 2398, 2399, 2400, 2401, 2402, 2403, 2404, 2405, 2406, 2407, 2408, 2409, 2410, 2411, 2412, 2413, 2414, 2415, 2416, 2417, 2418, 2419, 2420, 2421, 2422, 2423, 2424, 2425, 2426, 2427, 2428, 2429, 2430, 2431, 2432, 2433, 2434, 2435, 2436, 2437, 2438, 2439, 2440, 2441, 2442, 2443, 2444, 2445, 2446, 2447, 2448, 2449, 2450, 2451, 2452, 2453, 2454, 2455, 2456, 2457, 2458, 2459, 2460, 2461, 2462, 2463, 2464, 2465, 2466, 2467, 2468, 2469, 2470, 2471, 2472, 2473, 2474, 2475, 2476, 2477, 2478, 2479, 2480, 2481, 2482, 2483, 2484, 2485, 2486, 2487, 2488, 2489, 2490, 2491, 2492, 2493, 2494, 2495, 2496, 2497, 2498, 2499, 2500, 2501, 2502, 2503, 2504, 2505, 2506, 2507, 2508, 2509, 2510, 2511, 2512, 2513, 2514, 2515, 2516, 2517, 2518, 2519, 2520, 2521, 2522, 2523, 2524, 2525, 2526, 2527, 2528, 2529, 2530, 2531, 2532, 2533, 2534, 2535, 2536, 2537, 2538, 2539, 2540, 2541, 2542, 2543, 2544, 2545, 2546, 2547, 2548, 2549, 2550, 2551, 2552, 2553, 2554, 2555, 2556, 2557, 2558, 2559, 2560, 2561, 2562, 2563, 2564, 2565, 2566, 2567, 2568, 2569, 2570, 2571, 2572, 2573, 2574, 2575, 2576, 2577, 2578, 2579, 2580, 2581, 2582, 2583, 2584, 2585, 2586, 2587, 2588, 2589, 2590, 2591, 2592, 2593, 2594, 2595, 2596, 2597, 2598, 2599, 2600, 2601, 2602, 2603, 2604, 2605, 2606, 2607, 2608, 2609, 2610, 2611, 2612, 2613, 2614, 2615, 2616, 2617, 2618, 2619, 2620, 2621, 2622, 2623, 2624, 2625, 2626, 2627, 2628, 2629, 2630, 2631, 2632, 2633, 2634, 2635, 2636, 2637, 2638, 2639, 2640, 2641, 2642, 2643, 2644, 2645, 2646, 2647, 2648, 2649, 2650, 2651, 2652, 2653, 2654, 2655, 2656, 2657, 2658, 2659, 2660, 2661, 2662, 2663, 2664, 2665, 2666, 2667, 2668, 2669, 2670, 2671, 2672, 2673, 2674, 2675, 2676, 2677, 2678, 2679, 26

CIA-RDP86-00513R001652210008-6"

1ST. AND 2ND. SERIES										3RD. AND 4TH. SERIES									
PROCESSES AND PROPERTIES INDEX																			
<p><i>Oxidation of lignin. II. N. Ya. Sulechnik. <i>Lesokhim. Prom.</i> 5, No. 11, 20-2(1936); cf. <i>Ibid.</i> No. 10(1936).—</i> <i>The oxidation of wood pulp and tech. lignin to (CO₂H), by fusing with NaOH was investigated. A powd. sample was fused with 40% NaOH soln. at 170-200° for 6 hrs. in an elec. air oven. The optimal temp. for tech. lignin was 190-200° (the yield of (CO₂H), was 38.28%) and for pine sawdust 230-40° (the yield was 60.48-66.75%). However, increasing the duration of fusing of tech. lignin with NaOH to 12 hrs. increased the yield to 52.9%. The yield of (CO₂H), increased with an increase of the concn. of NaOH soln.; thus use of 60% NaOH pine sawdust yielded 78.82% of (CO₂H). Therefore, the yield of (CO₂H), by the oxidation of lignin (the described method was used) was higher than that obtained by the oxidation with HNO₃. Twenty-two references.</i> A. A. Podgorny</p>																			
<p>ASS-SLA METALLURGICAL LITERATURE CLASSIFICATION</p>																			

1ST AND 2ND COLUMNS		3RD AND 4TH COLUMNS		5TH AND 6TH COLUMNS	
<p>Production of asphalt from gas-generator tar for road construction. N. Ya. Sotchnik, <i>Lesokhim. Prom.</i> 1939, No. 2, 29; <i>Khim. Tekhn. Zhur.</i> 1939, No. 7, 9) - To decrease water-solub. and to increase softening temp., tar was condensed in the presence of strong mineral acids, or of chlorinated lime, and was blown with air while being heated, both with and without catalysts. The products had a considerable solub. in hot water and their mixts. were more water-absorbent than the mixts. obtained from petroleum bitumens with the same materials. Different water-absorption properties were obtained for bitumens produced by different methods from the gas-generating tar. Three tech. schemes for the production of bitumens from gas-generator tar and the characteristics of the materials so obtained are given. It is recommended to use these asphalts for the construction of roads as well as for inside asphalt concrete work. W. R. Houn</p>					
<p>ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION</p>					
1ST COLUMN		2ND COLUMN		3RD COLUMN	
1ST COLUMN		2ND COLUMN		3RD COLUMN	

DALE-CHAPMAN, N. A.

Solechnik, N. Ya. - "Professor Nikolay Nikolayevich Nepenin," (On his 65th birthday and 40th anniversary of the scientific-pedagogical and technical-production work in the field of the cellulose-paper industry), Trudy Lesotekhn. akad. im. Kirova, No 65, 1949, p. 237-38, with portrait

SO: U-5240, 17, Dec. 53, (Letopis 'Zhurnal 'nykh Statey, No. 25, 1949).

SOLECHNIK, N.Ya., professor; NOVOSIL'SKAYA, A.I.

Corrugated cardboard-base manufacture. Bum.prom. 27 no.12:14-16
D '52. (MLRA 7:10)

1. Lesotekhnicheskaya akademiya im. S.M.Kirova.
(Paperboard)

SOLECHNIK, N. Ya.; NATKINA, L.N.

The influence of wet pressing on the properties of impregnation papers.
Bumazh. Prom. 28, No.4, 11-15 '53. (MLRA 6:3)
(CA 47 no.14:7213 '53)

SOLECHNIK, N. YA.

B. T. R.
V. 3 No. 1
Mar. 1954
Wood and Forest
Products

4290* Production of Brown Wood Pulp From Shavings.
(Russian.) N. Ya. Solechnik, A. I. Novosel'skaya, and A. P.
Ivanova. *Bumizhnyye Promyshlennost*, v. 28, no. 11, Nov. 1953,
p. 25-28.
Brown wood pulp was obtained from fir and aspen shavings,
which compare favorably in break and stretch strength with
the usual fir pulp masses. Tables, micrographs.

SOLECHNIK, N. YA.

SOLECHNIK, N.Ya.; NATKINA, L.N.; NOVOSKL'SKAYA, A.I.

Thermal treatment of hard wood-fiber boards. Bum.prom. 29 no.7:
15-16 JI '54. (MLRA 7:8)

1. Ordena Lenina Lesotekhnicheskaya akademiya im. S.M.Kirova.
(Paperboard)

Solechnik, N. Ya.

Thermal stability of cellulose and paper. N. Ya. Solechnik and N. B. Trukhtenkova. *Zhur. Priklad. Khim.* 27, 416-24 (1958).—The most stable forms of cotton cellulose contain the greatest amts. of cellulose with a degree of polymerization (D.P.) of 1200 or higher and lack fractions of a D.P. of under 10. The least thermostable forms are those which lack fractions above 1200 and contain appreciable amts. of less than decameric units (sulphite pulp and related forms). Other varieties of cellulose have intermediate stability to heat. The most thermostable papers are those which yield aq. exts. with pH 6.5-7.5; pH under 6.5 are progressively less thermostable, the lower the pH of their exts., while those yielding exts. with pH above 7.5 are thermostable but show increasing yellowing on heating. Only the free H ions are important in this case, since the ions which are in an absorbed state do not affect thermostability as neither do Ca or Al ions. A simple characterization of thermal stability in paper is the ease of fracture on folding; the thermostable varieties are much more resistant to crease cleavage.
G. M. Kosolapoff

SOLECHNIK, N. Ya

Wells Thermal stability of cellulose and paper. N. Ya. Sole-
chnik and N. B. Trukhtenkova. *J. Appl. Chem. U.S.S.R.*
29, 453-60(1956)(Engl. translation).—See *C.A.* 50, 9737d.
B. M. R.

2

Solechnik, N. Ya.

✓ Reactivity of wood cellulose. N. Ya. Solechnik and A. A. Bakk (V. M. Molotov Technol. Inst., Leningrad). *Zhur. Priklad. Khim.* 29, 768-74(1956).—Examn. of cellulose specimens from cotton and sulfite and sulfate pulps showed that the chem. reactivity is affected mostly by the distribution of mol. wt. of the cellulose material. The higher the content of fractions with a degree of polymerization above 1200 and the lower that below 200 the less reactive is the material; the degree of interchain cross-linking is less important. A regulation of reactivity in formation of xanthate is possible by activation of cellulose at 50° with dil. mineral acids (HCl) for about 6 hrs. The measure of cross-linking is obtained by the isotherms of water adsorption.
G. M. Kosolapoff

Chem 2

SOLECHNIK, N. Ya.

Reactivity of wood cellulose. N. Ya. Solechnik and A. A. Bakk. J. Appl. Chem. U.S.S.R. 29, 533-8 (1956) (English translation). See C.A. 50, 11680g. B. M. R.

2

SOLECHNIK, Nikolay Yakovlevich

[Manufacture of fiberboard] Proizvodstvo drevesno-voloknistykh
plit. Moskva, Goslesbumizdat, 1959. 285 p.

(MIRA 14:3)

(Wood, Compressed)

SOLECHNIK, N.Ya., doktor tekhn.nauk; ALIKIN, V.P., inzh.

Some problems of rheology and grinding of fibrous vegetable
materials. [Trudy] NTO bum.i der.prom. no.8:144-169 '59;
(MIRA 16:2)

(Woodpulp)
(Milling machinery)

SOLECHNIK, N.Ya.; ALIKIN, V.P.

Deformation and beating of woodpulp. Bum.prom. 34 no.12:7-8
D '59. (MIRA 13:4)

1. Lesotekhnicheskaya akademiya im. Ye.M. Kirova (for Solechnik)
2. Leningradskiy tekhnologicheskoy institut tsellyuloznoy promyshlennosti (for alikin).
(Woodpulp)

SOLECHNIK, N.Ya., prof.

Professor Nikolai Nikolaevich Nepenin; on his 75th birthday and the 50th anniversary of his technical, scientific, and pedagogical activities. Trudy LTA no.87:3-4 '59. (MIRA 13:4)
(Nepenin, Nikolai Nikolaevich, 1883-)

SCLECHNIK, N.Ya.; NOVOSEL'SKAYA, A.I.

Searching for methods helping to increase the water resistance of
wood. Trudy LTA no.87:65-72 '59. (MIRA 13:4)

(Wood--Preservation)

SOLECHNIK, N.Ya.; ALIKIN, V.P.

Effect of polydispersity on the elastic and viscous properties
of cellulose and its grinding quality. Trudy LTA no.91:49-64
'60. (MIRA 15:12)

1. Leningradskaya lesotekhnicheskaya akademiya imeni
Kirova.
(Cellulose) (Paper industry)

PRAVILOVA, T.A.; SOLECHNIK, N.Ya.; KHODARINOVA, G.N.

Effect of the electromagnetic field of high-frequency currents
on paper. Trudy LTA no.91:145-153 '60. (MIRA 15:12)

1. Laboratoriya konservatsii i restavratsii dokumentov
AN SSSR.

(Paper—Disinfection) (Electromagnetism)
(Materials at high temperatures)

O 000:

/8-01

SOV 80-33-3-2/47

AUTHOR: Solovnikov, N. Ya.

TITLE: Nikolay Ignatyevich Nikitin (On the Occasion of His Seventieth Birthday)

PERIODICAL: Zhurnal prikladnoy khimii, 1960, Vol 33, Nr 3, 41-51P-522 (USSR)

ABSTRACT: This is a short biography of Nikolay Ignatyevich Nikitin, an eminent Soviet scientist and a Corresponding Member of the Academy of Sciences of USSR. He is an author of 110 scientific papers, a list of which is given at the end of the article.

Card 1/1

NIKITIN, Nikolay Ignat'yevich. Prinimali uchastiye: ABRAMOVA, Ye.A., starshiy nauchnyy sotr., kand. khim. nauk; AKIM, E.L., inzh.-tekhnolog; ANTONOVSKIY, S.D., dots., kand. tekhn. nauk; VASIL'YEVA, G.G., inzh.-tekhnolog; ZAYTSEVA, A.F., starshiy nauchnyy sotr., kand. tekhn. nauk; KLENKOVA, N.I., kand. tekhn. nauk; MALEVSKAYA, S.S., kand. khim. nauk; NIKITIN, V.N. starshiy nauchnyy sotr., kand. fiz.-mat. nauk; OBOLENSKAYA, A.V., kand. tekhn. nauk, dotsent; PETROPAVLOVSKIY, G.A., starshiy nauchnyy sotr., kand. tekhn. nauk; PONOMAREV, A.N., kand. tekhn. nauk, dots.; SOLECHNIK, N.Ya., prof., doktor tekhn. nauk; TOKAREV, B.I., inzh.; TSVETAYEVA, I.P., kand. tekhn. nauk; CHOCHIYEVA, M.M., kand. tekhn. nauk; ELIASBERG, M.G., doktor tekhn. nauk; YUR'YEV, V.I.; KARAFETYAN, G.O., red. izd-va; ZAMARAYEVA, R.A., tekhn. red.

[Wood chemistry and cellulose] Khimiya drevesiny i tselliulozy. Moskva, Izd-vo Akad. nauk SSSR, 1962. 711 p. (MIRA 15:2)

1. Chlen-korrespondent Akademii nauk SSSR (for Nikitin). 2. Zaveduyushchiy kafedroy fizicheskoy i kolloidnoy khimii Lesotekhnicheskoy akademii (for Yur'yev).

(Cellulose)

SOLECHNIK, N.Ya.; SHISHKINA, ¹P.

Theoretical basis and studies of the factors of semidry
molding. Nauch. trudy LTA no.98:11-18 '62. (MIRA 15:12)
(Hardboard)

SOLECHNIK, N.Ya.; LASKEYEV, P.Kh.; NOVOSEL'SKAYA, A.I.; MOZHE, Z.V.

Theoretical bases of the preparation of chips for milling.
Nauch. trudy LTA no.98:27-36 '62. (MIRA 15:12)
(Hardboard)

SOLECHNIK, N.Ya.; LASKEYEV, P.Kh.; MOZHE, Z.V.

(Cold alkaline process for birch and pine firewood chips.
Nauch. trudy LTA no.98:53-59 '88. (MIRA 15:12)
(Hardboard)

SOLECHNIK, N.Ya.; NATKINA, L.N.; KOROMYSLOVA, T.S.; LIKHACHEVA, L.I.

Investigating chemical processes for obtaining lignin plastics
binders. Nauch. trudy ITA no.98:61-68 '62. (MIRA 15:12)
 ~~sub.~~ (Hardboard)
 (Wood, Chemistry)

SOLECHNIK, Nikolay Yakovlevich; KOLOMIN, G.P., red.; FILIMONOVA,
A.I., red. izd-va; VDOVINA, V.M., tekhn. red.

[Production of fiberboard] Proizvodstvo drevesno-voloknistykh
plit. Izd. 2., perer. 1 dop. Moskva, Goslesbumizdat, 1963.
337 p. (MIRA 16:7)

(Hardboard)

SOLECHNIK, N.Ya.; NATKINA, L.N.; KOROMYSLOVA, T.S.; LIKHACHEVA, L.I.

Obtaining compressed laminated wood without binders. Der. prom.
12 no.3:9-11 Mr '63. (MIRA 16:5)

1. Lesotekhnicheskaya akademiya im. S.M.Kirova.
(Wood, Compressed)

SOLECHNIK, N.Ya.; TSAREV, G.I.; SHISHKINA, A.P.

Characteristics of fiberboard prepared by the method of dry
molding. Der. prom. 13 no.6:6-7 Je '64. (MIRA 17:6)

REIFER, I.; SOLECKA, M.

~~Terminal oxidases in wheat shoots~~. Acta biochem. polon. 5 no.3:277-293
1958.

1. Z Zakladu Biochemii Roslin Instytutu Biochemii i Bior'izyki PAN,
Warszawa Kierownik Zakladu: prof. dr I. Reifer.

(WHEAT,
terminal oxidases in wheat shoots (Pol))
(OXIDASES,
in wheat shoots, terminal oxidases (Pol))

ZIELINSKA, Cecylia; SOLECKA, Waleria

Behavior of blood platelets in pregnancy toxemias. Ginek. pol.
no.4:553-556 '62.

1. Z Instytutu Matki i Dziecka w Warszawie Dyrektor: prof. dr med.
F. Groer Z Kliniki Poloznictwa i Chorob Kobietych Kierownik: prof.
Kierownik: prof. dr. med. J. Lesinski Z Laboratorium Analizy
Kierownik: dr Waleria Solecka.

(BLOOD PLATELETS) (BLOOD CELL COUNT) (PREGNANCY TOXEMIAS)

SCLECKI, A.

A telephone-answering device. p. 302.
(TELE-RADIO. Vol. 2, no. 6, June 1957, Warszawa, Poland)

SO: Monthly List of East European Accessions (EEAL) LC. Vol. 6, No. 12, Dec. 1957.
Uncl.

SOLECKI, M.

"Lighting in the pulp and paper industry" (P. 230). PRZEGLAD PAPIERNICZY (Centralny Zarząd Przemysłu Papierniczego i Stowarzyszenie Inżynierów i Techników Przemysłu Papierniczego) Lodz, Vol. 9, No. 8, Aug. 1953.

SO: East European Accessions List, Vol 3, No. 8, Aug. 1954.

SOLECITY, M.

✓
1242. Changes in muds during drying and grinding as determined by thermal analysis. J. J. Glogoczowski and M. Solocki. *Bull. Polish Inst. Petrol.*, 1956, 8, 2-4 (suppl. *Nafte* (Krakow), 1956, 12).—While work was being done on formulation and preparation of Polish muds, investigations were started on the extent of thermal changes in the loams considered which may occur during processing. These show that not only is there a loss of water (at 90° C and 140° C) but the minerals change to others of the same stoichiometric mol composition, but of different crystallographic nature, mainly montmorillonite.
M. S.

5

The copper rotating-disk electrode in the spectrographic analysis of lubricating oils, crude oils, and natural brines. Zofia Bierhat and Mieczyslaw Sołtys (Inst. Naftowy, Krakow, Poland). *Bull. Inst. Naftowy* 8, 7-8 (1958).
 Pub. in *Nafta* (Poland) 14, No. 7 (1958).—A device composed of a spark generator and a Cu rotating-disk electrode (30 mm. in diam. and 2 mm. thick) was used for detg. trace amts. of metal in lubricating oils, crude oils, and natural brines. It was found very useful in detg. Pb in lubricating oils. Heavy petroleum products, such as paraffin wax or asphalt, can be examd. directly, whereas light products must be freed from volatile constituents. Z. Kurtyka

Solecki, Mieczysław

POLAND/Analytical Chemistry. Analysis of Inorganic Substances.

3

Abs Jour: Ref Zhur-Khim., No 9, 1959, 31053.

Author : Diernat, Zofia, Solecki, Mieczysław.

Inst : Petroleum Institute.

Title : Spectral Method of Determining Sequential Quantities of Elements in Rock Matrices.

Orig Pub: Hafta (Polish) 1958, 24, No 8, 214-215.

Abstract: This article describes the results of the studies carried out at the Petroleum Institute (Poland) on the correlation of geological cross sections by the method of qualitative, semi-quantitative and quantitative spectral analysis. In the analyses of various rock matrices (shale, marl, limestone, sandstone) the spectrums were photographed on an

Card : 1/3

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POTASSIUM Analytical Chemistry. Analysis of Inorganic
Substances.

E

Obs Jour: Ref Zhur-Kinin, No 9, 1959, 31053.

at 0.1%-0.0015%. Co_3O_4 which is introduced into
the standards and into the samples at 0.1% concen-
tration serves as inner standard. In order to
construct a characteristic curve gradual clearing
agent was utilized. -- Ve. Shipil'nyy.

Card : 3/3

106

SOLECKI, Mieczyslaw, inż.

Vanadium in crude oil at Weglowka. Nafta Pol 17 no.7:187-189
'61.

1. Instytut Naftowy, Krakow.

SOLECKI, R.

6638

634.014.1 : 624 072.223

Bolecki R. Free Vibrations on a Single-Span Beam Supported in a Most General Manner.

"Drgania swobodne belki jednoczłonowej podparciej w sposób najogólniejszy". Inżynieria i Budownictwo. No. 5, 1958, pp. 153-160, 19 figs., 1 tab.

Consideration of a single beam of a constant inertia moment and with continuous, uniform distribution of mass, fixed at both ends and elastically supported. An appropriate differential equation of the vibrations and amplitudes is evolved and then, after appropriate transformation, an equation for the frequency also. The latter equation is made up on the assumption that the beam axis is non-torsile and that torsional inertia and shearing are disregarded. By means of a suitable selection of parameters (characteristics of the elastic supports), an equation for frequency may be obtained, applicable to any possible supporting method. In the table presented, all possible methods of supporting a single-span beam are given, together with the corresponding equations of frequency.

ey/11

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3

POLYMER LETTERS EDITION 107-60

Российская академия наук, Институт проблем механики

Zagadnienia drgań nieliniowych, 1 (Problems of Nonlinear Vibrations, Vol. 1.)
Warsaw, Państwowe wyd-wo naukowe, 1960. 136 p. 650 copies printed.

Ed.: Stefan Ziemia; Deputy Ed.: Janusz Skowronski.

REMARK: This book is intended for scientists and engineers interested in theoretical and experimental research on vibrations.

COPYRIGHT. The collection contains 10 articles on the theory and measurement of nonlinear vibrations of structural systems. The basic problem is the nonlinear character of the dependence of the acting forces on the strains of the elasticity character of particularly elements of the investigated structural system. This nonlinearity is to be taken into consideration in calculating electrical self-excitation systems. The mathematical procedures of the investigation of motion in the calculation of the effect of the action of external periodic forces are given based on the theory of modal systems generalized according to the work of Khar'kov and other classic studies. The combination of the purely technical problems of vibration theory with the theory of dynamic systems has contributed to the rapid development of nonlinear vibration theory during the last decade. The main research activities in this field have been based on the development of adequate mathematical centers like the school of V.V. Zhuravskii and Krut'skoiy in the USSR. In Poland, the mathematical school of T. Szemplinski is working in the USSR. In England, the school of J.D. Achenbach and S. Masless is working in the USSR. The author of the present article is a member of the ZAD PAN (Academy of Sciences) Grand Analytic Laboratory. Pre-technical Problems of the Polish Academy of Sciences Study Theory of Elastic Technical Problems of the Polish Academy of Sciences has contained studies on two sets of problems: 1) the qualitative analysis and synthesis of motion of mechanical systems at several degrees of freedom; 2) the quantitative analysis of the motion of such systems under arbitrary conditions. The results of the analysis of the motion of such systems are presented in the references and summaries in Russian and English very close at the end of each article.

DELICH, E. (Warsaw). Generalisation of the Asymptotical Method of Bogolyubov to the Theory of Nonlinear Vibrations of Nonautonomous Systems With Heavy Damping

Ostafski, S. Problem of the Influence of the Simultaneous Action of Exciting Periodical Forces of Different Frequency on a Certain Nonlinear Vibration System

Figura 1. Wzrost (Kilogramy) w czasie trwania badania

Isakovich, I. (Vladimir). Wave Solution of the Dynamic Problem of an Elastic-Plastic Beam

Subject: 2. (Various) Vibration of a Plate Having the Shape of a Circular Sector

See Bibliographical Index of the Zabal Medina Group (Department of Literature) for 1977-1999

ALLIANCE LIBRARY OF CONGRESS

SOLFECK, R.

KURZAWA, Zbigniew; SOLECKI, Roman

Determination of traces of silver as a catalyst in the reaction of
 Mn^{2+} to Mn^{7+} oxidation. Chem anal 5 no.6:893-896 '60.
(EAI 10:9)

1. Department of General Chemistry, Politechnika, Poznan.

(Silver) (Catalysts) (Manganese)

SOLECKI, R.

The general solution of a triangular plate 30° - 60° - 90° by means of eigentransform. Bul Ac Pol tech 8 no.7:325-332 '60. (EEAI 10:3)

1. Department of Vibrations, Institute of Basic Technical Problems,
Polish Academy of Sciences. Presented by W.Wierzbicki
(Plates) (Fourier series) (Eigenfunctions)

SOLECKI, R.

General solution for a thin orthotropic rectangular plate. Bul Ac
Pol Tech 8 no.8:399-409 '60. (EEAI 10:6)

1. Department of Vibrations, Institute of Basic Technical Problems,
Polish Academy of Sciences. Presented by W.Nowacki.
(Vibration) (Elasticity) (Plates)

SOLECKI, Roman (Warsaw)

General solution of the problem of a rectangular orthotropic plate. Archiw mech 12 no.5/6:729-748 '60.

1. Department of Vibrations, Institute of Basic Technical Problems, Polish Academy of Sciences, Warsaw.

SOLECKI, Roman; ZIEMBA, Stefan

Vibration of electromechanical elements. Przegl elektroniki
2 no.5/6:370 '61.

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10 9100 660 1103, 1191, 1327

P/006/61/009/001/001/001
D213/D305

AUTHOR: Solecki, Roman

TITLE: A flat isotropic cylindrical shell with arbitrary boundary conditions

PERIODICAL: Rosprawy inzynierskie, v. 9, no. 1, 1961, 63-87

TEXT: Although shells of similar shape have been considered before, notably by V. Z. Vlasov (Ref. 1: Obshchaya teoriya obolochek (General Theory of Shells), GITTL; Moskva 1949), the author gives a new method of solving equations in Ref. 1 (Op. cit) which should provide much more exact numerical solutions for cylindrical shells. The shell under consideration is shown in Fig. 1. The static equilibrium of the shell is described with

$$\left\{ \begin{aligned} \frac{\partial^2 u}{\partial x^2} + \frac{1-\nu}{2} \frac{\partial^2 u}{\partial y^2} + \frac{1+\nu}{2} \frac{\partial^2 v}{\partial x \partial y} + \frac{\nu}{R} \frac{\partial w}{\partial x} &= 0, \\ \frac{1-\nu}{2} \frac{\partial^2 u}{\partial x \partial y} + \frac{\partial^2 v}{\partial y^2} + \frac{1-\nu}{2} \frac{\partial^2 v}{\partial x^2} + \frac{1}{R} \frac{\partial w}{\partial y} &= 0, \\ \frac{\nu E \delta}{R(1-\nu^2)} \frac{\partial u}{\partial x} + \frac{E \delta}{R(1-\nu^2)} \frac{\partial v}{\partial y} + D \nabla^2 \nabla^2 w + \frac{E \delta}{1-\nu^2} \frac{w}{R^2} + q_1 \frac{\partial^2 w}{\partial x^2} + \end{aligned} \right. \quad (1.1)$$

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A flat isotropic cylindrical shell...

The remaining boundary conditions are obtained by differentiation of Eqs. (3.3), (3.4), (3.5). The general solution confirms the correctness of the solution for the particular case of W. Nowacki (Ref. 3: Op. cit) and Z. Kaczkowski, (Ref. 9: Orthotropic Rectangular Plates with Arbitrary Boundary Conditions, Arch. Mech. Stos. 2, 8 (1958)) and Ref. 11: Ortotropowe płyty prostokątne o dowolnych warunkach brzegowych. Arch. Mech. Stos. 4, 7 (1955) s. 457). The difficulty in solving the general equation depends on boundary conditions. However, it should be a useful aid in solving many practical problems. With the aid of a computer it should be extremely helpful in solving not only cylindrical shells but also shells of any shape. There are 4 figures, 1 table and 12 Soviet-bloc references.

ASSOCIATION: Zakład badania drgań IPPT PAN (Vibrations Research Institute, IPPT PAS)

SUBMITTED: March 24, 1960

Card ~~11/12~~

SOLECKI, Roman

Vibration of straight bars and plates with concentrated masses.
Rozpr inż PAN 9 no.3:497-512 '61.

1. Zakład Badania Drgan Instytutu Podstawowych Problemów Techniki
Polskiej Akademii Nauk.

(Vibration)

S/124/63/000/003/043/065
D234/D308

AUTHOR: Solecki, R.

TITLE: Vibrations of plates with concentrated masses

PERIODICAL: Referativnyy zhurnal, Mekhanika, no. 3, 1963, 23, abstract 3V154 (Bull. Acad. polon. sci. Sér. sci. techn. 1961, v. 9, no. 4, 209-215 (Eng.; summary in Rus.))

TEXT: The problem is solved with the aid of a Fourier transformation for the product of two functions, one of which is Dirac's delta function, the other the deflection function of the plate. The author continues the development of the method proposed by himself earlier (Bull. Acad. polon. sci. Sér. sci. techn. 1960, v. 8, no. 7, 325-332). Its idea is the application of Fourier transformations to a wide class of problems (bending, free vibrations, loss of stability of plates with arbitrary boundary conditions, with varying mass of the plate and varying rigidity of elastic base, with concentrated masses) when the solution of any analogous (fundamental) problem for a plate of the same configuration is known. With the

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Vibrations of plates ...

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aid of the transformation, the initial differential equation (or system of these) goes over into an algebraic one (or a system). The kernel of the integral Fourier transformation is chosen in the form of eigenfunctions of a known (e.g. homogeneous) problem. The solution is obtained in the form of double Fourier series. As an example, the author considers the steady-state vibrations of a plate of constant thickness, compressed uniformly over the boundary, with concentrated masses, placed on an inhomogeneous rigid Winkler base. In the general case, when the boundary conditions in the problem in question and in the known solution are different it is necessary to solve an infinite system of algebraic equations. This is illustrated by considering free vibrations of a rectangular orthotropic plate with rigidly clamped edges and with a concentrated mass in the center. From an approximate solution of the frequency equation the author obtains a formula for the fundamental frequency of such a plate. 10 references. [Abstracter's note: Complete translation.]

Card 2/2

SOLECKI, R.

The non-homogeneous isotropic rectangular plate with arbitrary boundary conditions. Bul Ac Pol tech 9 no.6:329-335 '61.

1. Department of Vibrations, Institute of Fundamental Technical Problems, Polish Academy of Sciences. Presented by W. Nowacki.

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517 1481 1158, class 2807

P/033/61/013/001/002/009
D242/D301

AUTHOR: Solecki, Roman (Warsaw)

TITLE: A general solution of the problem of the orthotropic rectangular parallelepiped and an example from the theory of thick plates

PERIODICAL: Archiwum mechaniki stosowanej, v. 13, no. 1, 1961, 117-136

TEXT: The author presents detailed equations for the coefficients in the triple Fourier expansion of the general static or steady-state vibrational solution of the following equations

$$A_{11}u_{xx} + A_{66}u_{yy} + A_{55}u_{zz} + \mu\omega^2u + (A_{12} + A_{66})v_{xy} + (A_{13} + A_{55})w_{xz} = q_x, \quad (1.1.1)$$

$$(A_{12} + A_{66})u_{xy} + A_{66}v_{xx} + A_{22}v_{yy} + A_{44}v_{zz} + \mu\omega^2v + (A_{23} + A_{44})w_{yz} = q_y, \quad (1.1.2)$$

$$(A_{13} + A_{55})u_{xz} + (A_{23} + A_{44})v_{yz} + A_{55}w_{xx} + A_{44}w_{yy} + A_{33}w_{zz} + \mu\omega^2w = q_z, \quad (1.1.3)$$

for a rectangular parallelepiped with boundary conditions which are linear and at least sectionally continuous, the regions of contin-

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A gene: 1 solution...

uity having edges parallel to those of the parallelepiped. The boundary conditions are taken in the form of a double Fourier series, whose coefficients may be known or unknown, and the effect of approximation in their determination, when unknown, is examined by considering two static examples. The first is a straightforward calculation for a square prism symmetrically loaded on walls, when $z = \text{constant}$ and with no normal displacement on the lateral walls. The second involves an isotropic rectangular thick plate loaded vertically and clamped along the edge with the possibility of tangential horizontal displacement. An infinite system of algebraic equations is obtained for the unknown Fourier coefficients, and the results are found by replacing it by finite systems of different numbers of equations, the conclusion is reached that, at least, the sixth approximation should be found, i.e., 36 equations should be solved to obtain sufficient accuracy for correct comparison with the results of elementary methods. There are 4 figures and 8 Soviet-bloc references.

ASSOCIATION: Department of Vibrations, IBTP, Polish Academy of Sciences

SUBMITTED: July 13, 1960

Card 2/2

WOJTCZAK, Jan; SOLECKI, Roman

Research on the gelatinization process of some hydrosols used
in photography. Prace matemat przyrod Poznan 10 no.2:27-39
'62.

1. Physical Chemistry Department, Adam Mickiewicz
University, Poznan.

GUO ZHONG-HENG (Kuo Chung-heng); SOLECKI, R.

Free and forced finite-amplitude oscillations of an elastic thickwalled sphere of incompressible material. Bul Ac Pol tech 11 no.2:75-80 '63.

1. Department of Mechanics of Continuous Media, Institute of Fundamental Technical Problems, Polish Academy of Sciences, Warsaw. Presented by W.Nowacki.

SOLECKI, Roman

A certain solution for the problem of an anisotropic rectangular plate with variable rigidity; Rozpr ins PAN 11 no.2;203-215 '63.

1. Zaklad Mechaniki Osrodkow Ciaglych, Instytut Podstawowych Problemow Techniki, Polska Akademia Nauk, Warszawa.

GUO ZHONG-HENG; SOLECKI, Roman

Free and forced finite-amplitude oscillations of an elastic
thickwalled hollow sphere made of incompressible material.
Archiw mech 15 no. 3:427-433 '63.

1. Department of Mechanics of Continuous Media, Institute of
Basic Technical Problems, Polish Academy of Sciences, Warsaw.

SOLECKI, R.

Bending of a beam elastically connected with a rigid body.
Bul Ac Pol tech 12 no. 2:143-146 '64.

1. Presented by W. Kowacki.

SOLECKI, Roman (Warsaw)

Integral equation method of computing finite deflections
of beams. Archiw inż lad 10 no.3:267-278 '64.

KAPITANOWYK, Kazimierz; SOLECKI, Roman

A method of joining polyvinyl chloride floor slabs to a concrete base. Chemia Poznan no.2:59-63 '64.

1. Department of General Chemistry, Technical University, Poznan.

SOLECKI, Roman

Sintering of glass powders obtained from Polish glass. Chemia
Poznan no.2:65-72 '64.

1. Department of General Chemistry, Technical University, Poznan.

BELEC, Czeslaw; SOLECKI, Stanislaw

Estrogenic bodies in the Krynica mud. Pol. tyg. lek. 17 no.15:567-568
9 Ap '62.

1. Z Centralnego Sanatorium Wojskowego w Krynicy; kierownik: dr med.
Czeslaw Belec.

(MUD THERAPY) (ESTROGENS)

SOLICH, A.

"The dispatcher in textile industries." p. 25. (ODZIEZ, Vol. 4, no. 2, Feb. 1953, Lodz, Poland)

SO: Monthly List of East European Accessions, L. C., Vol. 3, No. 5, May 1954, Uncl.

SOLEK, Leszek, mgr inż.

New measuring instruments for construction engineering.

Inż i bud 21 no.11:394-395 N '64.

1. Technical University, Krakow.

SOLENIK, A., inzh.elektrik (Leningrad)

Y... fine air in the house. Zdorov's 4 no.11:32 N '58. (MIRA 11:11)
(ODORS) (OZONE)

SOLENIKOV, N.N., kand. tekhn. nauk

Distributing earth in constructing roadbeds using large scrapers.
Trudy RISI no. 4:144-150 '55. (MIRA 12:1)
(Scrapers) (Road construction)

SOLENIKOV, N.N., inzhener

For economy in the construction of earth road beds. Avt.dor.18
no.4:24-25 J1-Ag'55. (MLRA 8:11)
(Road construction)

SOLENIKOV, M., kandidat tekhnicheskikh nauk; POLYAKOV, A., inzhener.

New two-story trailer-trolley buses. Zhul.-kom.khos. 6 no.3:30 '56.
(MIRA 9:8)

(Berlin--Trolley)

SOI 1.1307, N.S., kand. tekh. nauk

Economical system for making roadbeds. Nauch. dokl. vyz. shkoly; stroi.
no. 4:265-268 '57. (MIRA 12:7)

1. Rekomendovann. kafedroy tekhologii stroitel'nogo proizvodstva
Rostovskogo inzhenerno-stroitel'nogo instituta.
(Road construction)

SOLENIKOV, M.N., kand. tekhn. nauk

Generalized indices of expenditures on roadbed construction.
Avt.dor. 22 no.2:20-21 F '59. (MIRA 12:2)
(Road construction)

SOLENIKOV, N.N., kand.tekhn.nauk

Let's use efficient methods in conducting earthwork operations.
Avt. dor. 23 no.8:20-21 Ag '60. (MIRA 13:8)
(Earthwork--Accounting)

SOLENKO, T. V.

PONOMAREV, V.D.; NI, L.P.; LEBEDEV, K.B.; SOLENKO, T.V.

Influence of sulfide ions on the speed of dissociation of aluminate
solutions. Izv. AN Kazakh. SSR. Ser. gor. dela, met., stroi. i stroimat.
no. 1: 34-40 '57. (MLRA 10:5)
(Sulfides) (Aluminates) (Dissociation)

PONOMAREV, V.D., otv.red.; NI, L.P., red.; RUBAN, N.N., red.;
SAZHIN, V.S., red.; SOLENKO, T.V., red.; ZHUKOVA, N.D., red.;
ROROKINA, Z.P., tekhn.red.

[Chemistry and technology of alumina; transactions] Khimiia i
tekhnologiya glinozema; trudy. Alma-Ata, Izd-vo Akad.nauk
Kazakhskoi SSR, 1961. 162 p. (MIRA 15:5)

1. Vsesoyuznoye soveshchaniye po khimii i tekhnologii glinozema,
Alma-Ata, 1959. 2. Institut metallurgii i obogashcheniya AN Kazakh-
skoy SSR(for Ni). 3. Kazakhskiy politekhnicheskii institut (for
Ponomarev, Sazhin).

(Alumina)

NI, L.P.; PEREKHREST, G.L.; SOLENKO, T.V.

Solubility of sodium aluminosilicate in aluminate solutions. Zhur.prikl.
khim. 37 no.1:22-29 Ja '64. (MIRA 17:2)

1. Institut metallurgii i obogashcheniya AN KazSSR.

PONOMAREV, V.D.; MONICH, V.K.; NURLYBAYEV, A.N.; NI, L.P.;
SOLENKO, T.V.; PANCHENKO, A.G.

Nepheline rocks of the Virgin territory as a comprehensive
raw material for the production of aluminum oxide, soda
products and cement. Vest. AN Kazakh. SSR 18 no.4:23-31
Ap '62. (MIRA 16:11)

SOLENKO, T.V.; NI, L.P.

Interaction of iron hydroxide with high-ratio aluminate solutions
in presence of calcium oxide at 90°C. Trudy Inst. met. i obog.
AN Kazakh. SSR 12:3-8 '65. (MIRA 18:10)

IL'IN, S., slesar' mekhanicheskogo tsekha, ratsionalizator; SOLENKOV, A.
elektromonter, ratsionalizator; VARLAMOV, I., tekhnik-konstruktor.
ratsionalizator.

Proper conditions for the work of efficiency promoters have not been
created. Stroi.mat. 3 no.2:28 P '57. (MLRA 10:3)

1. Shchurovskiy tsementnyy zavod.
(Shchurovo--Cement industries)

SOV/117-59-7-8/28

25(7)

AUTHOR: Solenkov, Yu.N.

TITLE: Modernization of a Planing-Milling Machine

PERIODICAL: Mashinostroitel', 1959, Nr 7, pp 18-19 (USSR)

ABSTRACT: The article describes how "Kurt Hube" planing-milling machines were modernized at the Kolomenskiy teplovozostroitel'nyy zavod (Kolomna Diesel Locomotive Plant) by making changes in the milling head and table displacement mechanism of the machine. The old journal bearings of the milling head spindle were replaced by roller bearings with the addition of forced lubrication, etc. The table displacement mechanism was provided with a new reversible electric motor "Ts-30/8-4" with 1425 and 720 rpm speed, a new worm gear pair, etc. This modernization has doubled the machining rate and reduced the auxiliary work time. There are 2 diagrams.

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KRASIL'NIKOV, Gennadiy Aleksandrovich; SOLENEK, Z.A., inzh.,
retsenzent; SOKOL'SKIY, I.F., red.; USTINOVA, V.A.,
tekhn. red.

[Oil and water cooling of the transformers of the V.I.
Lenin Volga Hydroelectric Power Station] Masliano-
vodianoe okhlazhdeniye transformatorov Volzhskoi TES im.
V.I.Lenina. Moskva, Gos.energ.izd-vo, 1960. 46 p.
(MIRA 16:10)

(Electric transformers--Cooling)
(Volga Hydroelectric Power Station (Lenin))

SOLENOV, N.I.

A case of brucellar etiology of meningitis. Zdrav. Kazakh.
23 no.2:73-74'63. (MIRA 16:10)

1. Iz Kirovskoy rayonnoy bol'nitsy Yuzhno-Kazakhstanskogo
kaya. (BRUCELLOSIS) (MENINGITIS)